

**CLAIMS**

What is claimed is:

1           1.       A method for transmitting graphical data via a communication line,  
2    comprising:  
3           generating graphical data representative of a user input;  
4           buffering the graphical data in memory; and  
5           transmitting portions of the graphical data over the communication line to a  
6    remote device at a controlled rate that does not exceed a predetermined maximum  
7    data transfer rate at which a bandwidth of the communication line would be exceeded.

1           2.       The method of claim 1, wherein generating graphical data comprises  
2    generating graphical data representative of a line entered using a touch-sensitive  
3    display.

1           3.       The method of claim 1, wherein transmitting portions of the graphical  
2    data comprises transmitting portions of the graphical data to such that no more than  
3    approximately 2 kilobits of graphical data is transmitted per second.

1           4.       The method of claim 1, further comprising receiving voice data input  
2    via a telephone.

1           5.       The method of claim 4, further comprising simultaneously transmitting  
2    the voice data over the communication line along with the portions of graphical data.

1           6.     A method for transmitting graphical data via a communication line,  
2     comprising:  
3           generating graphical data representative of a user input;  
4           identifying discrete data points of the generated graphical data; and  
5           transmitting only the identified discrete data points over the communication  
6     line to a remote device such less than all of the generated graphical data is transmitted  
7     so as to not exceed a bandwidth of the communication line.

1           7.     The method of claim 6, wherein generating graphical data comprises  
2     generating graphical data representative of a line entered using a touch-sensitive  
3     display.

1           8.     The method of claim 6, wherein identifying discrete data points  
2     comprises identifying data points on a periodic basis in which a data point is identified  
3     for every predetermined period during user input.

1           9.     The method of claim 6, wherein identifying discrete data points  
2     comprises identifying data points on a line length basis in which a data point is  
3     identified for every predetermined length of user input.

1           10.    The method of claim 6, further comprising buffering the generated  
2     graphical data and identifying new discrete data points that are positioned between the  
3     previously identified data points and transmitting the new data points over the  
4     communication line.

1           11.    The method of claim 10, further comprising repeating the steps of  
2   claim 10 in an iterative process.

1           12.    The method of claim 6, further comprising receiving voice data input  
2   via a telephone and transmitting the voice data over the communication line  
3   simultaneously with the data points.

1           13.    A method for displaying graphical data, comprising:  
2           receiving via a communication line discrete data points that represent  
3   graphical data;  
4           generating line segments that connect the discrete data points; and  
5           displaying the line segments such that a resultant line is shown that comprises  
6   the line segments and that represents a user input entered into another device.

1           14.    The method of claim 13, further comprising receiving via the  
2   communication line new discrete data points that are positioned between the  
3   previously received discrete data points, generating new line segments that connect  
4   the new received data points, and displaying the new line segments such that a new  
5   resultant line is shown.

1           15.    The method of claim 14, further comprising repeating the steps of  
2   claim 14 in an iterative process.

1           16.    The method of claim 13, further comprising receiving voice data  
2 simultaneous to receiving the discrete data points.

1           17.    A method for transmitting graphical data via a communication line,  
2 comprising:

3           generating graphical data representative of a user input;

4           identifying a reference data point;

5           transmitting information that describes the reference data point via the  
6 communication line;

7           identifying coordinates of a further data point that identify the location of the  
8 further data point relative to the reference data point; and

9           transmitting the coordinates to another device via the communication line.

1           18.    The method of claim 17, wherein generating graphical data comprises  
2 generating graphical data representative of a line entered using a touch-sensitive  
3 display.

1           19.    The method of claim 17, further comprising identifying a new  
2 reference data point, transmitting information that describes the new reference data  
3 point via the communication line, identifying coordinates of another data point that  
4 identify the location of the other data point relative to the new reference data point,  
5 and transmitting the coordinates via the communication line.

1           20.    The method of claim 17, further comprising receiving voice data input  
2   via a telephone and transmitting the voice data over the communication line  
3   simultaneously with coordinates.

1           21.    The method of claim 1, 6, or 17, further comprising providing an  
2   indication can to the user entering the input that communicates what portion of the input  
3   has been transmitted or is currently visible to a recipient.

1           22.    The method of claim 21, wherein providing an indication comprises  
2   showing a portion of the input in at least one of a different color, a different grayscale,  
3   and a different line thickness.

1           23.    The method of claim 22, further comprising removing the indication  
2   after passage of a period of time.

1           24.    A system for sharing graphical data via a communication line,  
2   comprising:

3                means for receiving voice data;

4                means for generating graphical data representative of a user input entered into  
5   a touch-sensitive display; and

6                means for simultaneously transmitting the voice data and information  
7   representative of the generated graphical data via the communication line such that a  
8   bandwidth of the communication line is not exceeded.

1           25.     The system of claim 24, wherein the means for transmitting comprise  
2     means for buffering the graphical data and means for transmitting portions of the  
3     graphical data over the communication line at a controlled rate that does not exceed a  
4     predetermined maximum data transfer rate.

1           26.     The system of claim 24, wherein the means for transmitting comprise  
2     means for identifying discrete data points of the generated graphical data and means  
3     for transmitting only the identified discrete data points over the communication line  
4     such less than all of the generated graphical data is transmitted.

1           27.     The system of claim 24, wherein the means for transmitting comprise  
2     means for identifying a reference data point, means for transmitting information that  
3     describes the reference data point via the communication line, means for identifying  
4     coordinates of a further data point that identify the location of the further data point  
5     relative to the reference data point, and means for transmitting the coordinates via the  
6     communication line.

1           28.     The system of claim 24, further comprising means for receiving via the  
2     communication line discrete data points that represent graphical data, means for  
3     generating line segments that connect the discrete data points, and means for  
4     displaying the line segments such that a resultant line is shown that comprises the line  
5     segments and that represents a user input entered into another device.

1           29.    A sketchpad device, comprising:  
2           a processing device;  
3           an input device that is configured to receive voice data;  
4           a user interface with which a user can input information;  
5           an output device that is configured to transmit data; and  
6           memory that includes a sketch program that identifies user input entered via  
7   the user interface and that generates graphical data representative of the user input,  
8   and a transmission control manager that is configured to, via the output device,  
9   simultaneously transmit the voice data and information representative of the generated  
10   graphical data via a communication line such that a bandwidth of the communication  
11   line is not exceeded.

1           30.    The sketchpad device of claim 29, wherein the input device comprises  
2   a telephone jack.

1           31.    The sketchpad device of claim 29, wherein the user interface comprises  
2   a touch-sensitive display.

1           32.    The sketchpad device of claim 29, wherein the output device comprises  
2   a modem.

1           33.    The sketchpad device of claim 29, wherein the sketch program is  
2   further configured to display the generated graphical information to the user.

1           34.     The sketchpad device of claim 29, wherein the transmission control  
2 manager is configured to buffer the graphical data and transmit portions of the  
3 graphical data over the communication line at a controlled rate that does not exceed a  
4 predetermined maximum data transfer rate.

1           35.     The sketchpad device of claim 29, wherein the transmission control  
2 manager is configured to identify discrete data points of the generated graphical data  
3 and transmit only the identified discrete data points over the communication line such  
4 less than all of the generated graphical data is transmitted.

1           36.     The sketchpad device of claim 29, wherein the transmission control  
2 manager is configured to identify a reference data point, transmit information that  
3 describes the reference data point via the communication line, identify coordinates of  
4 a further data point that identify the location of the further data point relative to the  
5 reference data point, and transmit the coordinates via the communication line.

1           37.     The sketchpad device of claim 29, wherein the transmission control  
2 manager is further configured to receive via the communication line discrete data  
3 points that represent graphical data, generate line segments that connect the discrete  
4 data points, and display the line segments such that a resultant line is shown that  
5 comprises the line segments and that represents a user input entered into another  
6 sketchpad device.



1           38.    A system stored on a computer-readable medium, the system  
2 comprising:  
3           logic configured to receive voice data;  
4           logic configured to generate graphical data representative of a user input; and  
5           logic configured to simultaneously transmit the voice data and information  
6 representative of the generated graphical data via a communication line such that a  
7 bandwidth of the communication line is not exceeded.